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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,639

04/22/2005

Michel Thebault

T5825.0002

9145

32172

7590

10/02/2007

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EXAMINER

CAMPANELLO, FRANCIS C

ART UNIT

PAPER NUMBER

1743

MAIL DATE

DELIVERY MODE

10/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/532,639

Applicant(s)

THEBAULT ET AL.

Examiner

Frank C. Campanell

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1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 34-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 34-50 is/are rejected.
- 7) ☒ Claim(s) 41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/07/2005 and 04/22/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 41 and 42 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim is given not in the proper alternative "or" format. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

Claims 1, 9, 11-15, 20-24, 26-27, 34-36, and 38-40 are rejected.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131

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USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1, 9, 11-15, 20-24, 26-27, 34-36, and 38-40 recites a broad recitation broad limitation followed by a narrower limitation. For example claim one states "B1/B2 is between 0.10 and 0.60 and preferably between 0.15 and 0.45".

3. Claims 44-50 provides for the use of fuel, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 44-50 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-11, 13-27, 34-44 46-48 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Schoppe et al (US 6451075).

6. Regarding claims 1-11, 13-24, 34-36, 40-43 and 47 Schoppe teaches jet fuel (abstract) having a lead content of less than or equal to 0.56 gram per liter of fuel, containing at least one first hydrocarbon base (B 1) comprising more than 70% volume of isoparaffins containing 4 or 5 carbon atoms, and also at least one second hydrocarbon base (B2) comprising more than 70% volume of isoparaffins containing 6 to 9 carbon atoms, and optionally at least one supplement (B3) comprising more than 70% volume of hydrocarbons of alkylaromatic type containing 6 to 11 carbon atoms, in which the content of the base B2 in the fuel is between 45% and 85% by volume and preferably between 50% and 82% by volume, and in that the ratio of the volume percentage amounts B1/B2 is between 0.10 and 0.60 and preferably between 0.15 and 0.45.

Regarding B1, B2 and B3- The abstract and example one (column 6 lines 15-25) disclose a mixture of 12 % isopentane. B1 is the 12% isopentane and 1% of the isobutane. B1 is 13% of the total mixture, and is 92% isoparaffin containing 5 carbon atoms, and 8% isobutane. B2 is given as the 67% isooctane and B2 is 67% of the total mixture, and B2 is 100% isooctane. B3 is given as 18% xylene.

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Xylene is aromatic, and therefore not a cycloparaffin. B3 is 100% xylene, and is 18% of the total mixture. There are no cycloparaffins in the mixture. The ratio of $B1/B2 = .13/.69 = .19$. The ratio $B3/B2$ is $.18/.67 = .27$

7. Regarding the lead content

<http://www.inchem.org/documents/icsc/icsc/eics0008.htm> states the density of tetraethyl lead is about 1.7 times that of water. The density of water is roughly 1 g/ml at room temperature. The prior art states the amount of tetra ethyl lead is 0.13 ml/ liter. See column 4 lines 57-62. . Therefore $0.13 \text{ mL} * 1.7 \text{ g/ml} * =$ roughly 0.221 grams a liter.

8. Regarding claims 26-27 and 38-39, Schoppe further teaches a heat of combustion of 43.5 MJ/kg.

9. Regarding claims 25 and 37, Schoppe further discloses an octane number above 130. See column 6 lines 49-51.

10. Regarding claims 44 and 48, a jet or airplane can be used as a competition vehicle.

11. Regarding claims 46 and 50 Schoppe further discloses the use of a jet engine for the purpose of reducing pollution. See column 2 lines 10-15.

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Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schoppe et al (US 6451075).

Regarding claim 12, Schoppe discloses xylene, and not toluene. It would have been obvious to one of ordinary skill in the art at the time of the invention that the chemical difference added by the one further methyl group in xylene would have no appreciable effect on the invention. Therefore the two compound in view of the invention are functional equivalents, and therefore obvious.

15. Claims 45 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al (US 6183703) and Schoppe et al (US 6451075)

Regarding claims 45 and 49, Hsu teaches a fuel cell with a reformer (column 2 lines 55-65) that uses paraffins as a fuel source in a reformer (column 6 lines 9-15). Hsu does not teach the fuel composition as stated in claim 1. Schoppe teaches the fuel composition of claims 1 and 15. Schoppe does not teach use in a reformer for a fuel cell. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the fuel in Schoppe as the fuel in Hsu to utilize the ability of the fuel disclosed in Schoppe to "provide a consistent and reliable octane rating" (column 1 lines 20-25) and reduce pollution by lead in the fuel (column 2 lines 10-15)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank C. Campanell whose telephone number is 571-270-3165. The examiner can normally be reached on Mon-Fri 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FCC


WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER